epidemic can be divided into four types (? varieties or species). The procedure was as follows: A series of meningococci from thirty-two cases of cerebro-spinal fever was collected, a rabbit was immunised with the first of them, and the agglutinating power of its serum tested upon all of them, with the result that nineteen of the strains showed good agglutination and the remaining thirteen slight agglutination or none at all. A second rabbit was then immunised with the first of these thirteen meningococci negative to the first serum, and agglutination tests made with all the thirty-two strains; eight of the cocci agglutinised well. A third rabbit was similarly prepared with one of the remaining five cocci, and four of the strains reacted, leaving one strain which had failed to react with the three serums. A fourth rabbit was prepared with this strain, and the serum tested on all the thirty-two strains; the homologous coccus alone was agglutinated, but none of the others. By the use of this test it has been found that only one type of meningococcus exists in a particular case of the disease or in a carrier, and the types have been found to remain quite stable and unaltered for a year.

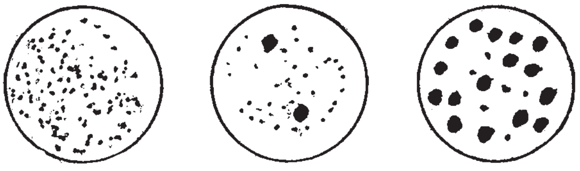

Fig. 2.—The fine dots represent colonies of salivary bacteria the heavy dots represent colonies of meningococcus.

Capt. Flack contributes an exhaustive analysis on cases of cerebro-spinal fever in the London district. Lieut.-Col. Gordon and Capt. Flack detail experiments on the attempt to disinfect carriers. Chloramine-T in the form of spray was found to be the most efficient agent, and carriers with a scanty infection clear up quickly under its influence, but cases with an abundant infection are far more difficult to "cure."

Major Hine describes the organisation of a supply department of the Central Laboratory for furnishing media and other requisites for the bacteriological examination of cases and contacts. A motor laboratory was used in this connection (Fig. 1); it contained working bench, water supply, incubators, etc., all the equipment necessary for investigating cases on the spot.

In a final paper Lieut.-Col. Gordon describes the inhibitory action of saliva upon the growth of the meningococcus. It was found that meningococci mixed with saliva fail to grow on appropriate media. If the saliva be diluted more and more, a stage is reached when the meningococci begin to grow, and as dilution proceeds the meningococci are finally unaffected (Fig. 2).

This action of saliva in inhibiting the growth of the meningococcus was found to depend upon the presence of the salivary micro-organisms, for if the saliva be centrifuged so as to get rid of these it no longer inhibits.

From this brief and incomplete summary it will be seen that the report contains matter of considerable interest to the bacteriologist and epidemiologist which should be of much value in the control of cerebro-spinal fever in the future.

R. T. Hewlett.

NOTES.

The annual meeting of the British Science Guild will be held at the Mansion House on Monday, April 30, at four p.m. The Lord Mayor will preside, and an address on "National Reconstruction" will be given by Lord Sydenham. Other speakers will be Sir William Mather, Mr. H. A. L. Fisher, President of the Board of Education, and Mr. H. G. Wells. Admission will be by ticket, to be obtained from the secretary, British Science Guild, 199 Piccadilly, London, W.1.

It is a common conceit among representatives of literary studies that attention to the natural sciences in educational courses is detrimental to the development of the noblest attributes of civilised life, and tends to produce a non-moral condition of mind. With complete disregard of the historical meaning of the "humanities," they use this term to signify such subjects as languages, literature, and history, in contradistinction to a dehumanised study which they classify as "science." Writers in the public Press may perhaps be forgiven a want of understanding in this matter, but responsible leaders of thought should enlighten the popular mind instead of deluding it by misrepresentation. When however, we read a communication from Prof. Ramsay Muir, professor of modern history in the University of Manchester, to a recent conference arranged by the Workers' Educational Association at Liverpool, we begin to wonder whether representatives of letters and history will ever understand what are the true aims and motives of science teaching. Prof. Muir is reported to have written: "I am mortally afraid of an over-emphasis upon natural science, especially in the teaching of children under sixteen. . . . What is likely to be the effect of concentrating all their attention upon the ruthless and non-moral laws of Nature? Something of the moral effects of this we have seen, I think, in Germany. The philosophy which has poisoned the national mind is a philosophy which tries to transfer the concepts and ideas of science to human life." It is untrue that teaching children the elements of the natural sciences leads to ruthlessness and is dangerous to civilisation, and the suggestion that German barbarity is the result of such teaching has its origin, not in fact, but in prejudice. The historians, moral philosophers, statesmen, and diplomatists responsible for the war were not educated in scientific schools, but in the Gymnasien, where even less attention is given to science than in many of our public schools. The fact is that in our own schools there is already more science teaching than in any corresponding schools in Germany and that if it leads to national degeneration, we should exhibit this character rather than the Germans. The attempt to father upon science the diabolical conduct of the war by our enemies is unworthy of literary learning, and a perversion of historical truth. Only an unscientific mind could lend itself to the expression of conclusions so little supported by evidence.

The food problem is one of those matters in which everyone may help the State by action, and by bringing influence to bear on others. A most important fact is the shortage of wheat in this country. Putting it very shortly, at our present rate of consumption of wheat we cannot get through until next harvest. It is everyone's duty to try to realise, and get others to realise, what it means to have this country without bread and potatoes for a month or six weeks. The result would be starvation, and the remedy is to eat one pound less of bread per week per person than we at present consume. Compulsory rationing is a thing to be avoided if possible; voluntary rationing may, when weighed in the balances, be found wanting. There is an intermediate course, which may be called "persuasive rationing." The distributors of flour are comparatively few in number. These might well be instructed to reduce in every way possible the flour sold by the amount required in the above-mentioned scheme. The baker in turn should be advised and encouraged to persuade each individual customer to cut down his weekly bread allowance by the pound a week suggested. In order to make this easy, the supplies of oatmeal, barley meal, maize meal, rice, etc., should be made readily accessible to the baker through millers and flour factors; the baker should be advised to prepare from these a cooked substitute for bread. Even if this had to be a biscuit, like the old-fashioned ship's biscuit, it would be eatable, and an efficient bread substitute. The average person does not like a helping of stewed rice when he wants a slice of bread, but a plain biscuit should be quite acceptable. The "persuasive" baker could then, while docking the bread allowance, offer instead the equivalent in the form of biscuits (or similar articles), other than of wheat, as an alternative. It is believed that this course would render it materially easier for the average individual to lessen his bread consumption.

At a meeting of the Aeronautical Institute on March 22, a paper by Col. B. R. Ward was presented, dealing with the means of securing the best supply of officers for the scientific services of the Army. The author urges that for the highest efficiency the Services must maintain contact with the civil professional organisations and a practical connection with the varied national work in engineering. The present war has demanded the utmost knowledge, experience, and energy from engineers in all branches of the profession. Engineers of all ranks have rendered invaluable services attached to the Army in the field, in workshops at the base, in constructing railways, in organising transport at home and abroad, and in advising Government departments. What the author most definitely suggests is that there should be a permanent corps of Mechanical Engineers, organised similarly to, and attached to, the Royal Engineers, capable of performing such functions and ready for any future emergency. The difficulty is that in peace-time there is not scope for the acquirement of the necessary varied experience within the range of military requirements. Col. Ward appears to think that the corps he proposes should in peace-time largely engage in civilian employment. There is something to be said for such a view. The earlier irrigation works in India were executed by Royal Engineer officers with great zeal and efficiency. But now public works there are carried out by a civilian department, it is believed with advantage to India. Engineering has become complex and is best in the hands of men who devote their lives to it or to a special branch of it, and who are not hampered by military duties or regulations. Still, no doubt the war has shown defects of preparation, and something in the direction of Col. Ward's suggestions may be desirable.

By the death of Mr. Walter Baily, London, and in particular the University of London, has lost one who has played an important part in connection with education. From a report in the *Times* of April 3 we learn that after a brilliant academic career at Cambridge (Second Wrangler, Smith's prizeman, and fellow of St. John's College) he was appointed inspector of schools in the West Riding of Yorkshire. From 1893 to 1915 he was a member of the council (which, on the incorporation of the college in the University, became the committee) of University College, London, and from 1902 to 1906 the chairman of its committee of management. His scientific work reflected his early mathematical training, though it was combined with a keen interest in experimentation. The record of it is to be found mainly in the early volumes of the Proceedings of the Physical Society, of which he was for many years secretary and afterwards a vice-president. One of the most interesting of his experimental researches consisted in a new mode of producing Arago's rotation. This is, in principle, an anticipation of the two-phase motor: two electromagnets with their poles beneath the Arago disc, and in planes at right angles to one another, having their polarity inverted by a commutator so that the fields have a phase difference of 90°. His other papers describe an integrating anemometer of his own design, the vibrations of a film in reference to the phoneidoscope, an illustration of the crossing of rays, a map of the world on Flamsteed's projection, a theorem relating to curved diffraction gratings, the construction of a colour map (in which he advocated the use of rectangular instead of trilinear co-ordinates), and a mathematical explanation of the appearances presented by starch and unannealed glass under the polariscope.

We regret to record the death at Washington, D.C., U.S.A., of Dr. Hamilton Wright at the age of forty-nine. While at Cambridge University and at the Pathological Laboratory of the L.C.C. Asylum, Claybury, Dr. Wright made investigations upon the nervous system, notably a number of experiments upon animals, with the view of demonstrating chromatolytic and dendritic changes in the neurones of the brain as a result of prolonged chloroform narcosis. He was next appointed by the Colonial Office to investigate beri-beri in the Straits Settlements, where he supervised the building and equipment of an excellent pathological laboratory at Kuala Lumpur. Here he conducted his researches on the causation of beri-beri. He came to the conclusion, both by experiments on animals and observations upon prisoners in the gaol, that the theory of rice being the source of the transmission of an organism to the human system was incorrect. In his report he states that "beri-beri is due to a specific organism which remains dormant in certain localities, but, having gained entrance to the body by the mouth, it multiplies locally (in the stomach or duodenum chiefly) and gives rise to a local lesion, and produces a toxin which, gaining the general circulation, acts on the peripheral terminations of both afferent and efferent neurones to cause bilateral symmetrical atrophy; and that finally the organism escapes in the fæces, to lie dormant again in places." Although the absence of the vitamine in polished rice is now the generally accepted theory of the causation of beri-beri, it does not exclude the possibility of a secondary microbial toxæmia acting as a coefficient. Dr. Hamilton Wright married the daughter of Senator Washburn, and took up work for the United States Government. He was appointed a member of the International Opium Commission, and prepared a Bill for the suppression of the opium trade, known as the Harrison Bill, which was passed by Congress.

During the Easter vacation the Port Erin Biological Station has been occupied by about twenty senior women students and post-graduate researchers—most of them present or future science schoolmistresses taking a course of practical marine biology, under the direction of Prof. Herdman, Mr. Douglas Laurie, and Miss R. C. Bamber, and supported by a grant from the Liverpool Council of Education. The wintry conditions have been unfavourable for much work in the open, but plankton observations in the bay have been made almost daily, and the vernal maximum of the Phyto-plankton (mainly Coscinodiscus and Chætoceras spp. at present), which is probably affected more by the increasing sunlight than by temperature, is now (April 12) well marked. The fish-hatching is going on as usual, and several millions of young plaice have already been set free to the west of the Isle of Man. A point of considerable interest is that the second generation of young plaice reared in captivity is now passing through the hatching-boxes. There are about eighteen adult plaice reared from eggs produced and hatched in the tanks in the season of 1914, and therefore just three years old, which are now spawning. One of these fish, which has been isolated in an aquarium tank and is now producing spawn, measures 27 cm in length (about 10½ in.). The average size of spawning female plaice in the Irish Sea is about 15 in., and the smallest previous record is about 13 in. The eggs produced from these three-year-old plaice are slightly smaller than those from older fish, but otherwise seem normal, and are developing into embryos and larvæ. A large shoal of grey mullet visited Port Erin Bay on April 11 and 12—a very unusual occurrence at this time of year—and swarmed close in to the rocks and beach at high tide. More than 400 large fish, some of them weighing up to 7 lb., were caught in a seine net and sent to the Liverpool market.

A copy of an address by Prof. Murray Butler, delivered at the annual dinner of the Pittsburgh (Pa.) Chamber of Commerce on February 10 last, has been received. Prof. Butler asks, and attempts to answer, the question: "Is America Drifting?" The general tone of the address would probably have been modified had it been delivered after the entry of the United States into the war, but its appeal to thinking Americans to do all in their power to assist the adjustment of American national institutions to modern-day needs and demands could scarcely have been more insistent. "I do not recall," says Prof. Butler towards the end of his address, "that any great administrator has ever been chosen to be President of the United States, and few governors or mayors seem to take any interest in the improvement of ordinary administration, such as every manager of an industrial or business undertaking concerns himself with every day and every hour." Americans, he states, are so concerned with their own personal affairs and immediate interests that they are letting America drift, and until every American feels his personal responsibility for the formulation of definite public policy at home and abroad, and for the businesslike administration of public affairs, the drifting will continue. There is, he insists, a call to Americans for national service and a preparation for it which, so far from sharing the spirit of militarism, are only the voice of democracy conscious of its obligations and its duties, as well as of its rights and opportunities.

The Societa Italiana delle Scienze has awarded the gold medal of the physical section to Prof. W. H. Bragg and Mr. W. L. Bragg in recognition of their distinguished work in physics.

Mr. T. Sheppard, curator of the Hull Municipal Museums, has been elected honorary life member of the Selby Scientific Society, in recognition of his services since the society was founded.

Recent enterprises in connection with the preparation of food and the development of its concessions in West Africa and elsewhere have led to the establishment of a research department by the Co-operative Wholesale Society, and Dr. Geoffrey Martin has just been appointed to direct its work. This appointment marks a new departure in connection with the co-operative movement, and has been rendered necessary by the concessions acquired by the Co-operative Wholesale Society in West Africa, Nigeria, and elsewhere, as well as by the development of fresh undertakings at home.

The National Canners' Association has offered Harvard University, says *Science* the sum of 4000*l.* annually for a period of three years to carry on an investigation of ptomaine poisoning, with special reference to canned goods. The offer has been accepted by the University, with the understanding that the investigation shall be conducted and the results published with entire academic freedom. The study will be made at the medical school, under the direction of Dr. M. J. Rosenau, professor of preventive medicine and hygiene. The National Research Council of the National Academy of Sciences is supervising the investigations on this subject.

The *British Medical Journal* announces the death, on February 27, of Prof. J. J. Dejerine, of the University, Paris, one of the leaders of contemporary neurology. He was born at Geneva in 1849, and studied medicine in Paris, where he took his doctor's degree in 1879. In 1901 he was appointed professor of the history of medicine, and afterwards transferred to the chair of internal pathology. Finally, in 1911, he became professor of nervous diseases and head of the clinic at the Salpêtrière. He was a member of the Académie de Médecine, and an honorary fellow of the Royal Society of Medicine, which awarded him the Moxon medal. From the first he devoted himself to the study of neuro-pathology, and his published papers cover the whole field of nervous disease. His chief work is the "Anatomie des Centres Nerveux," written in collaboration with his wife, herself a doctor of medicine.

At the fourth annual general meeting of the Institution of Petroleum Technologists, the elections were announced of Mr. C. Greenway as president, Prof. J. Cadman as a vice-president, and Sir Frederick Black and Major A. Cooper-Key as honorary members. The vice-presidents and council for the ensuing year are:—*Vice-Presidents:* The Rt. Hon. Viscount Cowdray of Cowdray, Sir Thomas H. Holland, and Sir Boverton Redwood, Bart.; *Council:* A. C. Adams, H. Allen, Sir Robert Balfour, Bart., Capt. R. W. Barnett, H. Barringer, Sir George Beilby, E. R. Blundstone, A. Campbell, J. T. Cargill, E. H. Cunningham Craig, A. W. Eastlake, T. C. Palmer, Dr. F. Mollwo Perkin, and R. Redwood.

In Southern Nigeria the wholesale destruction of interesting cult-objects by the fanatical adherents of the prophet who called himself "Elijah II." has robbed ethnologists of a vast amount of valuable material which can never be replaced. It is fortunate that Mr. P. Amaury Talbot, while engaged in official work in these districts, has been able to form a splendid collection of ethnological specimens, and both the British Museum and the Oxford Museum have acquired by his generosity a number of valuable accessions. Among them Mr. Henry Balfour in the April issue of *Man,* describes a remarkable carved and painted ceremonial paddle used by the Kalabari tribe.

This formed part of the paraphernalia of the amaningiu, or serpent, Juju, the serpent and the hippopotamus spirit being represented on Janus-like carvings on the back and front. A similar rendering appears on a Kalabari wooden mask from Abonnema, which is also described in this article by Mr. Henry Balfour.

IN the Journal of the Royal Anthropological Institute (vol. xlvi., July–December, 1916) Dr. Bronislaw Malinowski contributes a paper on "Baloma: The Spirits of the Dead in the Trobriand Islands," which lie off the eastern coast of British New Guinea. Incidentally, he discusses the question, brought into prominence by Spencer and Gillen in the case of the Australian Arunta, that the belief in reincarnation, a spirit child believed to enter the womb of the mother, excludes any knowledge of the physiological law of the process of impregnation. That this ignorance exists is certain. The writer deals with this difficult subject in a scientific and tactful way, and he arrives at the general conclusion that its prevalence among the Melanesians of New Guinea is a condition extending into much higher stages of development than it would have seemed possible to assume only on the basis of the Australian material.

THE *rôle* of the flagellated protozoa in infective processes of the intestines and liver (of animals) is the subject of Bulletin 166, Agricultural Experiment Station of the Rhode Island State College, U.S.A., by Dr. P. B. Hadley. Evidence is presented that a Trichomonas is the causative organism of an almost invariably fatal cecal and hepatic infection in birds. The pathological findings are described and the course of infection and development of the parasite is studied. The paper is illustrated by three excellent plates. In a further Bulletin (No. 168) the avenue and the development of tissue infection in intestinal trichomoniasis are discussed. The stages are, first, multiplication of the parasite in the cecal contents, then the flagellates penetrate the goblet cells of the intestinal mucous membrane, break through the basement membrane of the mucosa, and enter the sub-mucous connective tissue. Simultaneously, a marked invasion of the base of the crypts occurs and the crypt space becomes consolidated. As a result of this, the deep-lying cecal epithelium becomes to a large extent destroyed. Eleven plates illustrate this part of the investigation.

THE *Quarterly Journal of Experimental Physiology* for March (vol. x., Nos. 3 and 4) contains a series of papers by Prof. Noel Paton and Messrs. Findlay, Watson, Burns, Sharpe, and Wishart on the functions of the parathyroid glands and their relation to the disease known as tetany. It is shown that removal of the parathyroids induces a condition resembling tetany. This effect is brought about by the influence of the parathyroids on guanidin and methylguanidin metabolism; these substances are increased in amount by removal of the parathyroids, and their artificial administration induces a condition resembling tetany. Tetany may therefore be regarded as being caused by an increase in the amount of guanidin and methylguanidin in the body, due to disease or disordered function of the parathyroids.

IN *California Fish and Game* for January a long and valuable history is given of the introduction of food and game fishes into the waters of California. The author, Mr. W. H. Shebley, who is in charge of the fish-culture department of the California Fish and Game Commission, carries his survey from the initiation of this work in 1871 to the present day. While he has many failures to record, as must always be the case in acclimatisation work, he has a long list of very striking successes. Among these are to be reckoned the introduction of the common shad. Between 1871 and 1880 as many as 619,000 shad fry were imported from the Castleton hatchery in New York and turned down in the Sacramento River. As a result, this fish is now one of the commonest in Californian waters. The introduction of carp, "which will probably become one of the State's most valuable food fishes," has been equally successful, though it has brought about the destruction of the Californian perch. As a set-off against this, however, it is pointed out, it forms the chief food of the black and striped bass. The introduction of the black bass into California is regarded as "one of the greatest feats of acclimatisation of new species of fish in the history of fish-culture." Loch Leven trout have also thriven. The introduction of the carp, we note, has given cause for repentance in one case, at any rate. Their rapid increase in the Chautauqua Lake so fouled the water as to make it almost unfit for use. In consequence, pike and muskelunge were introduced to exterminate the carp, but the latter still remain in possession, the fish introduced to effect the work of extermination having themselves been exterminated. An excellent coloured plate of the eastern brook-trout forms the frontispiece of this number.

As a result of the shortage of cotton owing to the war, we learn from "Am Haüslichen Herd" (Zürich, Pestalozzigesellschaft, xx., 6) that an old industry is being revived in the cultivation of stinging nettles for textile purposes, both in Switzerland and Germany. In order to obtain fibres of the best quality, the nettles should be grown on rich soil and thinned out when necessary. In the spring, when they are about a foot high, they are to be cut down and the young tops may be eaten like spinach. The second growth produces much better fibres than the first, and the stems are cut down in June or July, when they have reached a height of about 4 ft. Another crop is obtainable in September. In October the shoots can be used as fodder, and for this purpose they may be dried, when they will lose their stinging properties. They may also be chopped up for feeding poultry. It is much to be hoped that in our country a similar use will be made of the stinging nettles which at present constitute such a pest in gardens and plantations.

ON the basis of Bohr's theory, taking account of the magnetic and electrical fields of the atom, a general formula for spectral series has been deduced by Mr. J. Ishiwara (Proc. Tokyo Math. Phys. Soc., series 2, vol. ix., No. 2). The formula may be written:—

$$\nu = \mathrm{A} - \frac{\boldsymbol{\alpha}}{(m+\mu)^2[1+a(\mathrm{A}-\nu)+b(\mathrm{A}-\nu)^{\frac{3}{2}}]} - \frac{\sigma\boldsymbol{\alpha}}{(m+\mu)^4},$$

where ν gives the wave numbers of lines corresponding to successive integral values of m, A is the limit of the series, and $\boldsymbol{\alpha}$ is the Rydberg constant, slightly varied according to the atomic weight of the element; μ, a, and b are constants special to each series. The last term is a relativity correction, and σ has the numerical value 0·00015908. As a test of the formula, the author has employed it in a re-calculation of the numerous series of enhanced lines of magnesium discovered by Fowler, for which the Rydberg constant has four times the value appropriate to the arc lines. The formula appears to be well adapted to the series in question, and there are some curious relations between the values of μ for six of the series.

ON behalf of the Bureau of Standards, Dr G. K. Burgess, the head of the metallurgical department of the bureau, has recently made a series of observations at steel works in the United States with the object of determining the best methods to use in the measurement of the temperatures in Bessemer and open-hearth practice. He finds that the present methods involve differences of temperature between consecutive Bessemer teems and between successive melts in the open-hearth furnace which may exceed 50° C., and strongly advises the use of some form of optical pyrometer using monochromatic light, in order to introduce greater certainty in the conditions which determine the properties of the steel produced. In the complete paper, which is to be issued by the bureau, details of the methods adopted are to be given. At present information is available in abstract only in the Transactions of the American Institute of Mining Engineers, before whom Dr. Burgess gave an account of his work at the New York meeting in February.

Prof. McAdie, the director of Blue Hill Observatory, proposes a new temperature scale in which the freezing point of water is to be taken as 1000, and the absolute zero −273° C., as 0. He points out the objections to the present scales; and the suggested scale, if we could make a new start, would certainly have some advantages. For meteorological purposes the Centigrade degree is too large, since it is possible to express mean values of temperature with accuracy to within a few tenths of a degree, and a difference of 1° C. in the mean summer temperature of a place, for example, makes quite an appreciable difference in the climate; but a quarter of this, about 1 on the suggested scale, would not be appreciable, so that it would suffice on it to express values to the nearest whole degree. The advantage of starting from the absolute zero is very great, especially to those who have to deal with radiation and to artillerists or airmen, who are concerned with the density of the upper strata, but the suggested scale would involve the printing of four figures, which is one too many.

From an article contributed by M. Renouard to *La Nature* of March 31 it appears that in France the metric system has not yet ousted all the old customary denominations of measure in many trades, especially those connected with the textile industry. For example, in the hosiery trade, sizes of stockings for children are indicated in terms of the old Paris inch, while the numbers denoting the lengths of ready-made articles for grown-up people relate to the same ancient measure: thus, size "36" signifies a length of 36 in. Again, in the north of France the widths of cloths and linens are denoted by such fractions as 2/3, 4/4, 7/8, the widths being the corresponding fractions of the "aune" of 120 centimetres. It is true that traders are not always aware of the origin of the symbols they employ, and there is an amusing instance of this in the case of certain silk stuffs invoiced "15/16," which some shopkeepers from ignorance have represented to their customers as "fifteenth- and sixteenth-century taffetas." Gold and silver fringes and ribbons are sold according to numbers which correspond to their widths in terms of the old Paris "line." Numerous examples of the persistence of ancient or foreign systems of measure occur also in the lace trade and in the numeration of silk and cotton yarns. Although so many anomalies still exist as regards measures, the old customary weights, on the other hand, appear to have been completely superseded in France by metric denominations.

The appearance of the decennial index of the *Biochemical Journal* induces us to make a mental review of the biological chemistry of recent years. Although first issued in 1907, it was not until five years later that this journal was taken over by the newly formed Biochemical Society, for which it has since been edited by Profs. W. M. Bayliss and A. Harden. According to the original idea, opportunities for chemists and biologists to forgather were to be provided by establishing a biochemical club. But the club, shortly after its foundation, was transformed, to the regret, perhaps, of many of its members, into the present Biochemical Society. This society was instituted for the purpose of facilitating intercourse between those biologists and chemists who are interested in the investigation of problems common to both. The title "Chemistry of the Living Organism," used in its widest sense, might perhaps be suggested to include all such problems. It will be acknowledged that the society has attained its object to a marked degree, and the index of the *Biochemical Journal* is a witness to the valuable work which has been accomplished by the society through its members. The names of nearly all the well-known workers in biological chemistry are to be found in this index, and the subjects of their labours range from the distribution of maltase in plants to the treatment of trypanosomiasis. Those who ever have occasion to refer to the literature of biological chemistry will certainly find this index a valuable adjunct to their libraries.

OUR ASTRONOMICAL COLUMN.

The Planet Mercury.—This object will be favourably visible to the naked eye on clear evenings during the remainder of the present month. Its light varies considerably owing to change of phase, but with good conditions the planet shines more strongly than a star of the first magnitude. About an hour after sunset it should be readily discerned above the W.N.W. horizon when the sky is clear. It will set as under:—

		h.	m.				h.	m.	
April 19	...	9	1	p.m.	April 25	...	9	19	p.m
20	...	9	6		26	...	9	19	
21	...	9	10		27	...	9	20	
22	...	9	13		28	...	9	20	
23	...	9	16		29	...	9	19	
24	...	9	18		30	...	9	18	

The planet will arrive at its greatest elongation on April 24, when it will set about 2h. 10m. after the sun. The above are Greenwich mean times; for summer time one hour must be added.

Comet 1917*a* (Mellish).—Prof. Strömgren has circulated the following revised elements and ephemeris, calculated by J. Braae and J. Fischer-Petersen from observations on March 21 (Lick), March 25 (Königstuhl), and March 30 (Copenhagen):—

$$T = 1917,\ \text{April } 10{\cdot}6285\ \text{G.M.T.}$$

$$\left.\begin{aligned} \omega &= 120^\circ\ 36{\cdot}73' \\ \text{☊} &= 87^\circ\ 23{\cdot}77' \\ i &= 32^\circ\ 23{\cdot}57' \end{aligned}\right\}1917{\cdot}0$$

$$\log q = 9{\cdot}28448$$

Ephemeris: Greenwich Midnight.

1917	R.A.			Decl.	Log r	Log Δ	Mag.
	h.	m.	s.				
April 19	0	41	7	−1 26·9	9·5732	0·0132	5·2
21		44	32	3 7·8	9·6331	0·0340	5·6
23		48	31	4 28·9	9·6852	0·0529	6·0
25		52	47	5 35·5	9·7309	0·0701	6·3
27	0	57	9	6 31·3	9·7713	0·0858	6·6
29	1	1	31	7 19·1	9·8076	0·1002	6·8

Laboratory Work in Astrophysics.—An instructive account of the relation of laboratory investigations to astrophysical research has been given by Dr. A. S. King (Pub. Ast. Soc. Pacific, February). Apparatus